

RKF Engineering LLC
Application on FCC Form 442 for an Experimental STA

NARRATIVE STATEMENT

Pursuant to Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.61 (2012), RKF Engineering Solutions hereby respectfully requests an experimental special temporary authority ("STA") to operate in the 3627.5-3637.5 MHz and 5960-5970 MHz bands for the purpose of demonstrating and evaluating the functionality and performance of prototype devices under design and development.

The following provides additional details regarding this request.

A. Purpose of Operation and Need for Experimental License:

RKF Engineering is testing equipment that will operate in the Above referenced bands. It seeks to demonstrate and test key functionalities of prototype equipment designed to improve Non-Line-of-Sight ("NLoS") reliability and spectral efficiency of wireless backhaul systems. RKF Engineering also seeks to test and evaluate the coverage, capacity, and reliability of multiple backhaul link operations in on the same frequency channel

B. Need for an Experimental License and Expedited Treatment:

RKF Engineering was recently asked to conduct demonstrations and tests beginning on May 1, 2015, to benchmark the equipment as part of a vendor selection process. The demonstrations cannot be postponed until a later date.

C. Locations and Antenna Specifications of Proposed Operations:

Location No. 1:

2300 E Imperial Hwy El Segundo, CA 90245 EL SEGUNDO, California ,
33-55-50 North Latitude,
118-22-59 West

RKF Engineering also proposes to operate a single mobile unit within 5 miles or less of this location. The unit will be placed in a vehicle with telescopic mast and an antenna height to tip of not more than 20 feet AGL.

D. Technical Specifications:

1. Frequencies Desired

RKF Engineering requests an experimental STA to operate in the 3627.5-3637.5 MHz and 5960-5970 MHz

2. Effective Radiated Power

All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

Mean ERP: 6.02 W (for 10 MHz operation)

Mean EIRP: 10.0 W (for 10 MHz operation)

In addition, RKF Engineering will evaluate environmental considerations to ensure compliance with Section 1.1307 of the FCC's rules, 47 C.F.R. § 1.1307 (2012), and, in particular, the human exposure requirements set forth in FCC OET Bulletin No. 65.

3. Modulation and Emissions

Emission Designator: 10M0D7D

4. Equipment To Be Used

Equipment Type: Prototype Equipment

Manufacturer: Tarana Wireless Inc.

Transmitter Model Nos.: EXPERIMENTAL CONCENTRATOR, EXPMT CPE,

E. Restrictions on Operation:

RKF Engineering does not propose to market, sell, or lease prototype equipment to end users. Moreover, no fees will be charged to entities evaluating the equipment during this test. After the experimentation ceases, it will recall and recover all unauthorized devices.

RKF Engineering also recognizes that the proposed experimental operation must not cause harmful interference to authorized facilities. It does not anticipate a problem, but should interference occur, it will immediately take steps to resolve the interference, including if necessary discontinuing operation. To that end, RKF Engineering would advise entities using the equipment that permission to operate the equipment has been granted under experimental authority issued to RKF Engineering, is strictly temporary and may be canceled at any time, and that any unauthorized

equipment may not be and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

Specifically, RKF Engineering proposes to label the equipment or user information conspicuously with information as follows:

FCC STATEMENT

Permission to operate this device has been granted under experimental authority issued by the Federal Communications Commission to RKF Engineering, is strictly temporary, and may be canceled at any time. This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained. Thus, the user does not hold a property right in the device and may be required to return the device.

F. Public Interest Statement:

RKF Engineering submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will permit it to develop innovative equipment that will accommodate the communications needs of users.

G. Contact Information:

For questions about this application, please contact:

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Note: with respect to Question 4: The rooftop antenna will be rotated 360° to measure connectivity with the truck-mounted CPE